

REMARKS

Support for the amendment to claim 1 is found at Synthesis Example 3 of Table 1 at page 35 of the specification.

Claims 1-9, 12 and 14 are rejected, and claims 10, 11 and 13 are withdrawn from consideration as being directed to a non-elected invention. Review and reconsideration on the merits are requested.

Claims 1-9, 12 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,169,139 to van Cleeff, or U.S. Patent 6,774,164 to Lyons et al or U.S. 2002/0193500 to Hintzer et al. Each of the three references was cited as teaching the formation of fluoropolymer dispersions using methods said to include polymers within the scope of the present claims and a small genus of surfactants including those exemplified by the specification. Acknowledging that the octanol/water partition coefficient and extent of surfactant removal are not mentioned, the Examiner considered that these characteristics would be inherent in the prior art which is said to use the same polymers and surfactants.

Applicants respectfully disagree, and request the Examiner to reconsider in view of the amendment to the claims and the following remarks.

The invention of amended claim 1 relates to a method of producing a fluoropolymer aqueous dispersion which comprises carrying out a concentration treatment comprising a concentration operation of a pretreatment fluoropolymer aqueous dispersion. The pretreatment fluoropolymer aqueous dispersion is obtained by carrying out a polymerization in an aqueous medium in the presence of a fluorine-containing surfactant (A) having an octanol/water partition coefficient of 1.5 to 3.4.

Because the fluorine-containing surfactant (A) is a fluorine-containing surfactant having an octanol/water partition coefficient of 1.5 to 3.4, the method of producing a fluoropolymer aqueous dispersion according to the present invention can efficiently produce a fluoropolymer aqueous dispersion very low in fluorine-containing surfactant content and high in solid matter concentration (see page 32, lines 8-13 of the specification).

The aqueous dispersion obtained in Experiment Example 3 gives an M^1/M^0 value exceeding 0.5, whereas the aqueous dispersion obtained in Experiment Example 5 gives an M^1/M^0 value of about 0.3. The difference between them in terms of logP as shown in Table 1.¹ Thus, the results demonstrate the effect of the invention.

On the other hand, van Cleef and Hintzer do not disclose an octanol/water partition coefficient of the fluorinated surfactant at all. Further, Zonyl UR fluorinated surfactant used in Examples 1 to 7 of van Cleef has an octanol/water partition coefficient of more than 3.5.

Lyons also does not disclose an octanol/water partition coefficient of fluorinated surfactant at all. Further, Zonyl FS-62 and Forafac 1033D used in Examples 1 to 9 of Lyons have an octanol/water partition coefficient of more than 3.5. Furthermore, Lyons does not disclose carrying out a concentration treatment.

Clearly, the prior art investigators did not recognize the significance of employing a fluorine-containing surfactant having an octanol/water partition coefficient of 1.5 to 3.4 as claimed. Further, as shown above, the prior art does not inherently disclose carrying out a

¹ The octanol/water partition coefficient is the coefficient of partition between 1-octanol and water and is expressed in terms of logP [wherein P represents the ratio between the fluorine-containing surfactant (A) concentration in octanol/fluorine-containing surfactant (A) concentration in water as found upon phase separation of a fluorine-containing surfactant (A)-containing octanol/water mixture (1:1)]. Page 4, lines 3-10 of the specification.

concentration treatment of a pretreatment fluoropolymer aqueous dispersion obtained by carrying out a polymerization in an aqueous medium in the presence of a fluorine-containing surfactant (A) having an octanol/water partition coefficient of 1.5 to 3.4 as claimed. For the above reasons, it is respectfully submitted that the amended claims are patentable over the cited references, and withdrawal of the foregoing rejection under 35 U.S.C. § 103(a) is respectfully requested.

Withdrawal of all rejections and allowance of claims 1-9, 12 and 14 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance the prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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